



Dongfeng Cummins Curve and Datasheet

Engine Type: ISDe270 30(Truck)

Curve Number: FR92159



DONGFENG CUMMINS ENGINE **PROFORMANCE CURVE**

Engine Model
ISDe270 30

Curve No.
FR92159

CPL Code
1995

Date
June

Displacement: 6.7L

Bore: 107mm

Stroke: 124.5mm

Fuel System: BOSCH (HPCR)

Cylinders: 6

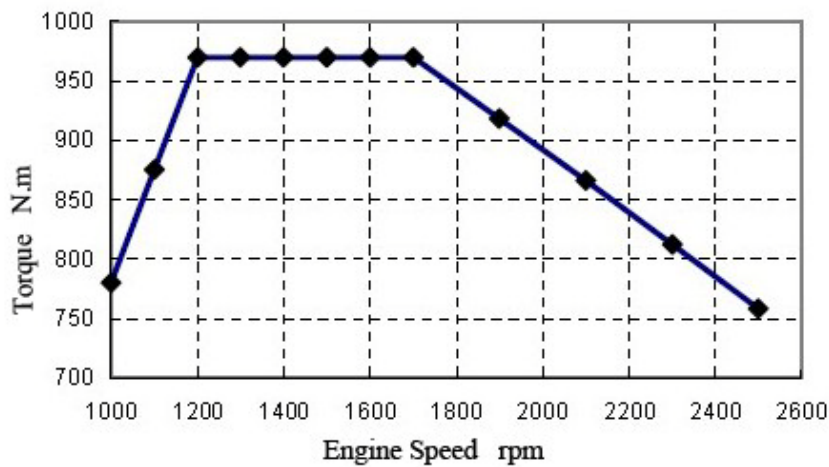
Advertised Power: 198kW@2500 rpm

270HP@2500 rpm

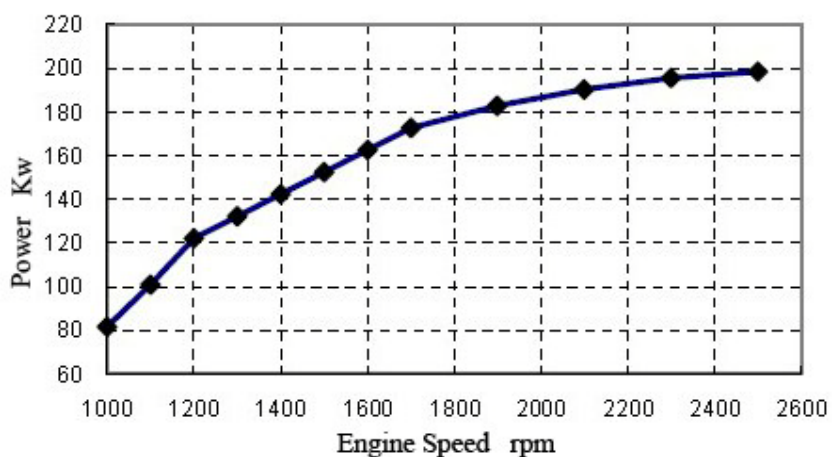
Peak Torque: 970N.m@1200-1700 rpm

Aspiration: Turbocharged & Air to air inter-cooled

Rating Type: Continuous



Torque	
rpm	N.m
1000	780
1100	875
1200	970
1300	970
1400	970
1500	970
1600	970
1700	970
1900	918
2100	866
2300	812
2500	758



Power	
rpm	kW
1000	82
1100	101
1200	122
1300	132
1400	142
1500	152
1600	163
1700	173
1900	183
2100	190
2300	196
2500	198

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Diesel Engine for Vehicle Performance Data

Technical Request

Aspiration:	Turbocharged & Air to air inter-cooled
Emission Certification	GB17691-2005
Dry Weight: kg(without starter engine and air compressor)	509
Wet Weight: kg	530
Compression Ratio:	17.3:1
Distance from Center of Gravity to the Front Engine Block:	402mm
Distance from Center of Gravity to the Crankshaft Centerline:	144mm
Maximum Bending Moment at Rear Face of Block:	1360N.m
Limit load of Thrust Bearing:	
Instantaneous maximum:	3781 N
Continuous maximum	1779 N

Performance Characteristic

Idle Speed:	600-800rpm
Maximum non-load speed:	2850rpm
Over speed performance(within 15 seconds):	4200rpm
Maximum Altitude at Continuous Operation:	3000m
The clutch torque @ 800rpm:	610N.m
When install exhaust braking:	
The limit exhaust pressure of Turbocharger export @2850 rpm:	413kPa
Maximum power of Exhaust brake:	N/A

Engine Speed (RPM)	Oil Pressure (kPa)	Air Flow (m3/min)	Air Pressurized		Exhaust Flow (m3/min)	Exhaust Temperature (°C)	Fuel Consumption (l/hr)	Heat Energy Loss	
			Flow (kg/min)	Pressure kPa				Coolant (KW)	Air (KW)
2500							220	95.0	39.0
2300							-	91.0	36.0
1400								75	21.8

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All values within $\pm 5\%$.

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Diesel Engine for Vehicle Performance Data

LUBRICATION SYSTEM

Oil Sump Capacity:

Upper Limit: 17.5L

Lower Limit: 15L

Capacity of the whole system: 19.5 L

AIR SYSTEM

Air intake maximum temperature rise from Outside to the Turbocharger 15°C

The allowable maximum restriction when use Dry Air Filter

Medium: kPa (mmH₂O) 2.9

Heavy: kPa (mmH₂O) 3.7

The allowable maximum restriction when use dirty Filter Element: kPa (mmH₂O) 6.2

TURBOCHARGED & INTERCOOLED

Environment design parameters

The highest temperature between environment and intake manifold: 30 °C

The maximum allowable cold pressure difference before and after the intercooler: 13.5kPa

The allowable diameter of the intake manifold: 65mm

EXHAUST SYSTEM

The maximum exhaust resistance with exhaust manifold and muffler: kPa(mmHg) 10.0

The allowable diameter of the exhaust manifold: 75mm

FUEL SYSTEM

The maximum resistance of Fuel Pump when use clean filter: 30kPa

Maximum fuel return oil resistance: 20kPa

The highest oil temperature (at oil pump exports): 70°C

The minimum capacity of oil tank: 0.2 m³/hr

COOLING SYSTEM

Engine Coolant Capacity: 9.4 L

The range of temperature adjustment for the Thermostat: 83-95 °C

The maximum pressure of Coolant(without pressure cap and thermostat closed): 200 kPa

The highest coolant temperature (at engine exports): 100°C

Maximum degassing time: 25mins

Maximum coolant flow to accessories: 37 L/min

The lowest coolant temperature: 70°C

Minimum speed of water-filling: 19 l/min

Minimum coolant expansion volume relative to the system capacity: 6 %

Water tank capacity without water expansion:	11L
Minimum allows pressure of pressure cap:	50 kPa
The alarm temperature of the coolant:	104°C

24V ELECTRICAL SYSTEM

Maximum resistance of starting circuit	0.004Ω
The cold start current when engine and the clutch separate: CCA	550

COLD STARTING SYSTEM

The lowest cold starting temperature without auxiliary starting device	-12°C @ 120rpm
The lowest cold starting temperature with starting device	-25°C @ 120rpm

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All data is subject to change without notice- contact Cummins for most recent data.